

# EE481: Industrial Economics

## Antitrust Laws and Policy (Chapter 19)

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## Question

Is monopoly bad?

## Main Points

Please read Chapter 19 (Carlton and Perloff) up to “Price-fixing and Output Agreements, p.649.

- Antitrust laws should promote efficiency and total welfare (eliminate DWL).
- Market power = power to raise price above MC. Thus, there would be DWL if a firm uses this power.
- 
- Price-fixing (and cartel) is generally prohibited.
- Agreements among competitors may increase or decrease welfare. Thus, should be evaluated case-by-case.

# Market Power, Monopoly Power

- Market Power = ability to raise price above MC.
- Market power usually comes from 3 sources
  - High market concentration (small number of firms).
  - Low price elasticity of demand (consumers really need the product).
  - Collusion (firms collaborate to fix high price).
- In other words, when there is little (or no) competition, firms have market power.

# Exploitation of Market power

How can firm exploit market power?

# Exploitation of Market power

- With market power, firms *could* exploit it by:
  - Set price much higher than MC.
  - Collaborate with competitors to maintain high price.
  - Make its supplier(s) give a higher discount so to gain advantage over smaller competitors.
  - 
  - Lobby the government to maintain its monopoly status.
- Having market power but not exploiting it is “not illegal”.
- Only the “exploitation of market power” is illegal.

# Antitrust Law

- Antitrust laws are used to prevent firms with market power from exploiting its market power.
- Thailand's Competition Act 2542 (1999 BC)
  - Prohibit abuse of dominant position (having market power)
  - Prohibit mergers and acquisitions that could result in a higher market power and tendency to exploit it.
  - Prohibit agreements among competitors that could lessen competition
  -
- Antitrust laws in other countries have similar content.



# Antitrust Laws (Thailand)

มาตรา ๒๗ ห้ามมิให้ผู้ประกอบธุรกิจใดร่วมกับผู้ประกอบธุรกิจอื่นกระทำการใด ๆ อันเป็นการผูกขาด หรือลดการแข่งขัน หรือจำกัดการแข่งขันในตลาดสินค้าใดสินค้าหนึ่งหรือบริการใดบริการหนึ่งในลักษณะอย่างใดอย่างหนึ่งดังต่อไปนี้

(๑) กำหนดราคาขายสินค้าหรือบริการเป็นราคาเดียวกัน หรือตามที่ตกลงกัน หรือจำกัดปริมาณการขายสินค้าหรือบริการ

(๒) กำหนดราคาซื้อสินค้าหรือบริการเป็นราคาเดียวกัน หรือตามที่ตกลงกัน หรือจำกัดปริมาณการรับซื้อสินค้าหรือบริการ

(๓) ทำความตกลงร่วมกันเพื่อเข้าครอบครองตลาดหรือควบคุมตลาด

(๔) กำหนดข้อตกลงหรือเงื่อนไขในลักษณะสมรู้กัน เพื่อให้ฝ่ายหนึ่งได้รับการประมูลหรือประกวดราคาสินค้าหรือบริการ หรือเพื่อให้ฝ่ายหนึ่งเข้าแข่งขันราคาในการประมูลหรือประกวดราคาสินค้าหรือบริการ

(๕) กำหนดแบ่งท้องที่ที่ผู้ประกอบธุรกิจแต่ละรายจะจำหน่ายหรือลดการจำหน่ายสินค้าหรือบริการได้ในท้องที่นั้น หรือกำหนดลูกค้าที่ผู้ประกอบธุรกิจแต่ละรายจะจำหน่ายสินค้าหรือบริการให้ได้โดยผู้ประกอบธุรกิจอื่นจะไม่จำหน่ายสินค้าหรือบริการนั้นแข่งขัน

(๖) กำหนดแบ่งท้องที่ที่ผู้ประกอบธุรกิจแต่ละรายจะซื้อสินค้าหรือบริการได้ หรือกำหนดตัวผู้ซึ่งประกอบธุรกิจจะซื้อสินค้าหรือบริการได้

# Antitrust Laws (EU)

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SECTORS					

# Antitrust Laws (EU)

## Article 101

(ex Article 81 TEC)

1. The following shall be prohibited as incompatible with the internal market: all agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the internal market, and in particular:

- (a) directly or indirectly fix purchase or selling prices or any other trading conditions;
- (b) limit or control production, markets, technical development, or investment;
- (c) share markets or sources of supply;
- (d) apply dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;
- (e) make the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, are the subject of such contracts.

2. Any agreements or decisions prohibited pursuant to this Article shall be automatically void.

3. The provisions of paragraph 1 may, however, be declared inapplicable in the case of:

- any agreement or category of agreements between undertakings,
- any decision or category of decisions by associations of undertakings,
- any concerted practice or category of concerted practices,

which contributes to improving the production or distribution of goods or to promoting technical or economic progress, while allowing consumers a fair share of the benefits and does not:

- (a) impose on the undertakings concerned restrictions which are not indispensable to the attainment of these objectives;
- (b) afford such undertakings the possibility of eliminating competition in respect of a substantial part of the products in question.


# Goals of the Antitrust Law

- To promote economic efficiency (eliminate DWL)
  - Exploitation of market power results in inefficiency of production in both short and long-run
    - ex1. monopoly may choose to fix a high price, lower quantity -> DWL.
    - ex2. long-term monopoly may have less incentive to improve quality or innovate. When there is no new product, there is no new market -> DWL. When the quality is poor, people are not happy -> DWL.
    - ex3. a big monopoly firm has great incentive to maintain its power -> could lobby the government ->

## Goals of the Antitrust Law (2)

- Usually, **market competition** ( ) promotes efficiency.
- But there are 2 cases where we may allow firms to have market power.
  - ① Economy of scale - Electricity authority, Public Transportation, etc. We then “regulate” natural monopolies to prevent them from exploiting their power.
  - ② Incentive to innovate (R&D) - We give patent rights for firms to enjoy monopoly profits.
- Under other circumstances, more competition is generally preferred.

# Enforcement

- The  is responsible for administering the antitrust law in Thailand.
- The office oversees complain cases by consumers, business competitors and can also bring a suit by itself.
- In the US, UK, Japan, South Korea and other countries where the enforcement of the laws is successful, their offices have analyst teams to assess the efficiency effect of a firms' action.
  - Price-fixing:
  - Merger and acquisition:

## Enforcement: example

- Example:

# Penalty: Economic Theory of Damages(1)

How much should the penalty be in order to prevent violation of the law?

## Penalty: Economic Theory of Damages(1)

- Theoretically a firm would not violate law if  $E(\text{gain}) \leq E(\text{punishment})$ .
- Thus, if a violation is detected probability = 1, a fine equal to the gain from exploiting market power could prevent the action.
  - ex: If the profit from exploiting market power (violating the law) is 7 million baht and the fine is 7 million baht, a firm would not find it profitable to violate the law.

## Penalty: Economic Theory of Damages(2)

- If a violation is detected at a 25% probability, a fine would have to be at least 4 times higher than the gain from violating the law.
  - ex: If the expected gain is 7 million

$$E(\text{gain}) \leq E(\text{punishment})$$

$$7 \leq \text{prob}(\text{detect}) \times \text{fine}$$

$$7 \leq 0.25 \times \text{fine}$$

$$28 (\text{million}) \leq \text{fine}.$$

## Market Power (1)

- Market Power = ability to raise price above MC.

$$\text{Market Level } \frac{P - MC}{P} = -\frac{\sum_{i=1}^n s_i^2}{\varepsilon} = -\frac{HHI}{\varepsilon}$$

- This shows that market power comes from 3 sources
  - High market concentration (small number of firms -> high  $\sum_{i=1}^n s_i^2$ ).
  - Low price elasticity of demand ( ).
  - Collusion ( ).
- Usually, all firms would have some market power according to this definition. But according to the law, having market power means having “ ” market power.

## Market Power (2)

- A competition authority may assess market power through the previous equation.
- If they know MC of the firm, then they can use  $\frac{P-MC}{P}$  formula.
- If they do not know MC (or do not trust the numbers given by firms), they can use the  $-\frac{\sum_{i=1}^n s_i^2}{\epsilon}$  formula
  - $s_i =$
  - $\epsilon =$  price elasticity of demand
  - Thus, need to be able to give “market definition”, e.g. what products are considered to be in the same market.

## Market Definition(1)

- What products should be in the same market?
- For example:
  - is Sprite in the same market as Pepsi and Coca Cola?
  - is pencil in the same market as pen?
  - is Honda Jazz in the same market as BMW Mini?
- Basically, they have to share the same customer base!

## Market Definition(2)

- Product dimension
  - Should be close substitute
  - SSNIP test (Small but Significant Non-transitory Increase in Price test) - given that producers are originally competitive, if we raise the price of all products in the same market at the same time, producers should gain profits from doing this.
  
- Price correlation test -
  
  
- Price difference test -

## Market Definition(3)

- Geographic dimension
  - If products in different geographical areas are in the same market, raising price at one place should also increase price at another place.

## Price-Fixing and Output Agreements

- Firms that compete in the same market play a similar game as ...
- If they do not cooperate - the best they can do is the Cournot result (if they choose  $q$ ), or the Bertrand result (if they choose  $p$ ).
- If they cooperate, they could get a higher profit.
  - Maximum joint-profit = monopoly profit. Each firm can they get their share.
  - Agreeing to set price = monopoly price and quantity = monopoly quantity (less than efficient/competitive level) is against the antitrust law. (Cartel)

## Not all Agreements are Illegal

- Only the agreements to maintain high price, limit quantity or hurt the competitors are illegal.
- Some agreements are set to facilitate trade and increase efficiency.
  - Bus fares.
  - Lumpsum music license fee.

## Reference and Further Reading



Carlton, D.W. and J.M., Perloff.  
*Modern Industrial Organization*. 4th Edition.  
Pearson Addison Wesley Press, 2005.